Summary of Type, Patient Characteristics/Interventions, and Secondary Outcomes of Selected Studies

Study	Type	Patient Characteristics/Interventions	Secondary Outcomes
Outcomes of Therapy With Venetoclax Combined With Hypomethylating Agents in Favorable-Risk Acute Myeloid Leukemia (AML)[1]	Retrospective analysis of 46 patients with favorable-risk AML who underwent therapy with Ven-HMA between 2016 and 2020 at 4 academic cancer centers in the US	Favorable-risk AML was defined by the presence of either core-binding factor (CBF) [t(8;21) and inv(16) or t(16;16)], nucleophosmin 1 (NPM1) mutation in the absence of FLT3 internal tandem duplication mutations, or bi-allelic CEBPA mutations Ten (22%) patients had CBF, 21 (46%) had NPM1 mutations, and 13 (28%) had bi-allelic CEBPA mutations	No difference in response was observed based on the favorable genetic alteration subgroups (80% in CBF, 86% in NPM1, and 77% in CEBPA mutations; P =.44), patient age (P =.83), AML type (de novo or secondary; P =.47), prior transplant (P =1.00), or the type and schedule of HMA (P =.66)
Flotetuzumab as Salvage Therapy for Primary Induction Failure and Early Relapse Acute Myeloid Leukemia[2]	An update of the first-in-human study of flotetuzumab, an investigational CD123 x CD3 bispecific DART® molecule in clinical development	38 patients with primary induction failure or early relapse who received the recommended phase 2 dosage of flotetuzumab (500 ng/kg/d) administered as a continuous infusion in 28-d cycles, following a step-up (priming) lead-in dose during cycle 1, wk 1	In patients who responded, median overall survival was 7.7 mo; overall 6- and 12-mo survival rates are 41% and 24%, respectively
Five-Year Final Results of a Phase 3 Study of CPX-351 Versus 7+3 in Older Adults With Newly Diagnosed High-Risk/Secondary Acute Myeloid Leukemia (AML): Outcomes By Age Subgroup and Among Responders[3]	Prospectively planned, final 5-y follow-up results of a phase 3 randomized trial	309 patients were randomly assigned 1:1 to receive 1 or 2 induction cycles of CPX-351 (100 units/m^2 [cytarabine 100 mg/m^2 plus daunorubicin 44 mg/m^2] as a 90-min infusion on days 1, 3, and 5 [second induction: days 1 and 3]) or 7+3 (cytarabine 100 mg/m^2/d continuously for 7 d plus daunorubicin 60 mg/m^2 on days 1 to 3 [second induction: 5+2])	Analysis of subgroups showed improved median overall survival with CPX-351 compared with 7+3 was maintained in patients aged 60 to 69 y (9.59 and 6.87 mo, respectively; HR=0.730) and in patient aged 70-75 y (8.87 and 5.62 mo, respectively; HR=0.52)
Results of Venetoclax and Azacitidine Combination in Chemotherapy Ineligible Untreated Patients with Acute Myeloid Leukemia with IDH 1/2 Mutations[4]	Ongoing phase 3 randomized trial of venetoclax (Ven) plus azacitidine (Aza) or placebo plus Aza	The Ven+Aza arm received Ven 400 mg daily orally (days 1–28) and Aza (75 mg/m2; days 1-7/28-day cycle). DH1/2 mutations were detected in 79 patients reated with Ven+Aza and 28 in the placebo arm.	Median duration of response and overall survival were 29.5 and 17.5 months for Ven +Aza and 24.5 and 12.months for the placebo group.
Outcomes of *TP53*-Mutant Acute Myeloid Leukemia With Venetoclax and Decitabine[5]	Prospective trial of 121 patients with AML with *TP53* mutation who received frontline DEC10-Ven therapy	Patients aged ≥60 y with newly diagnosed and previously untreated AML were treated with decitabine 20 mg/m^2 for 10 d every 4 to 6 wk for induction, followed by decitabine for 5 d after CR/CRi Venetoclax dosage was 400 mg/d or equivalent	Median overall survival was 5.2 mo for AML with *TP53* mutation and 19.4 mo for wild-type *TP53* AML (HR=4.68; *P* <.001) Survival difference was significant after adjustment for other variables
Molecular Characterization of Clinical Response and Relapse in Patients With *IDH1*-Mutant Newly Diagnosed Acute Myeloid Leukemia Treated With Ivosidenib and Azacitidine[6]	An ongoing phase 1b study evaluating the use of IVO+Aza in newly diagnosed patients and characterizing clonal evolution and resistance	Patients with *IDH1* mutation received ivosidenib 500 mg/d and subcutaneous azacitidine 75 mg/m^2 on days 1-7 in 28-day cycles Longitudinal bulk DNA sequencing was analyzed for 22 of 23 patients and included 5 patients with available samples at relapse or disease progression	For further evaluation, single-cell DNA sequencing was performed in 15 patients; in 2 with relapsed disease, an emerging *IDH2* mutation was observed by bulk DNA sequencing: • 1 patient had a minor *IDH2* clone present at baseline that expanded independently from *IDH1* during therapy • The second patient had a subclonal baseline *PTPN11* clone evolved to gain both *RUNX1* and IDH2 mutations, becoming the predominant clone at relapse
Clinical Benefit and Tolerability of Crenolanib in Children With Relapsed Acute Myeloid Leukemia Harboring Treatment Resistant *FLT3 ITD* and Variant *FLT3 TKD* Mutations Treated on Compassionate Access[7]	Compassionate use of crenolanib in 5 cases of pediatric AML with *FLT-3* mutation	Two patients had an *FLT3*-internal tandem duplication; 3 had an *FLT3* kinase domain mutation All patients had extramedullary AML; 3 had CNS leukemia and non-CNS extramedullary AML (1 submandibular, 1 testicular, 1 liver and spleen)	Crenolanib was given with curative intent to 3 patients in combination with daunorubicin-cytarabine liposome (Vyxeos) with high-dose cytarabine, and to 1 patient as maintenance therapy after a second HSCT; 2 patients received crenolanib as palliation for rapidly progressing AML
AGILE: Phase 3, Double-Blind, Randomized, Placebo-Controlled Study of Ivosidenib in Combination With Azacitidine in Adults With Newly Diagnosed Acute Myeloid Leukemia and an *IDH1* Mutation[8]	Ongoing phase 1b trial enrolling for randomized phase 3	23 patients with newly diagnosed AML with *IDH1* mutation received ivosidenib 500 mg/d with subcutaneous azacitidine 75 mg/m^2 for 7 days on a 28-d schedule	Median response duration has not been reached; overall 12-mo survival probability is 82.0% Clearance of the *IDH1* mutation (<0.02%-0.04%) in bone marrow mononuclear cells was observed in 10 of 14 (71%) patients with CR